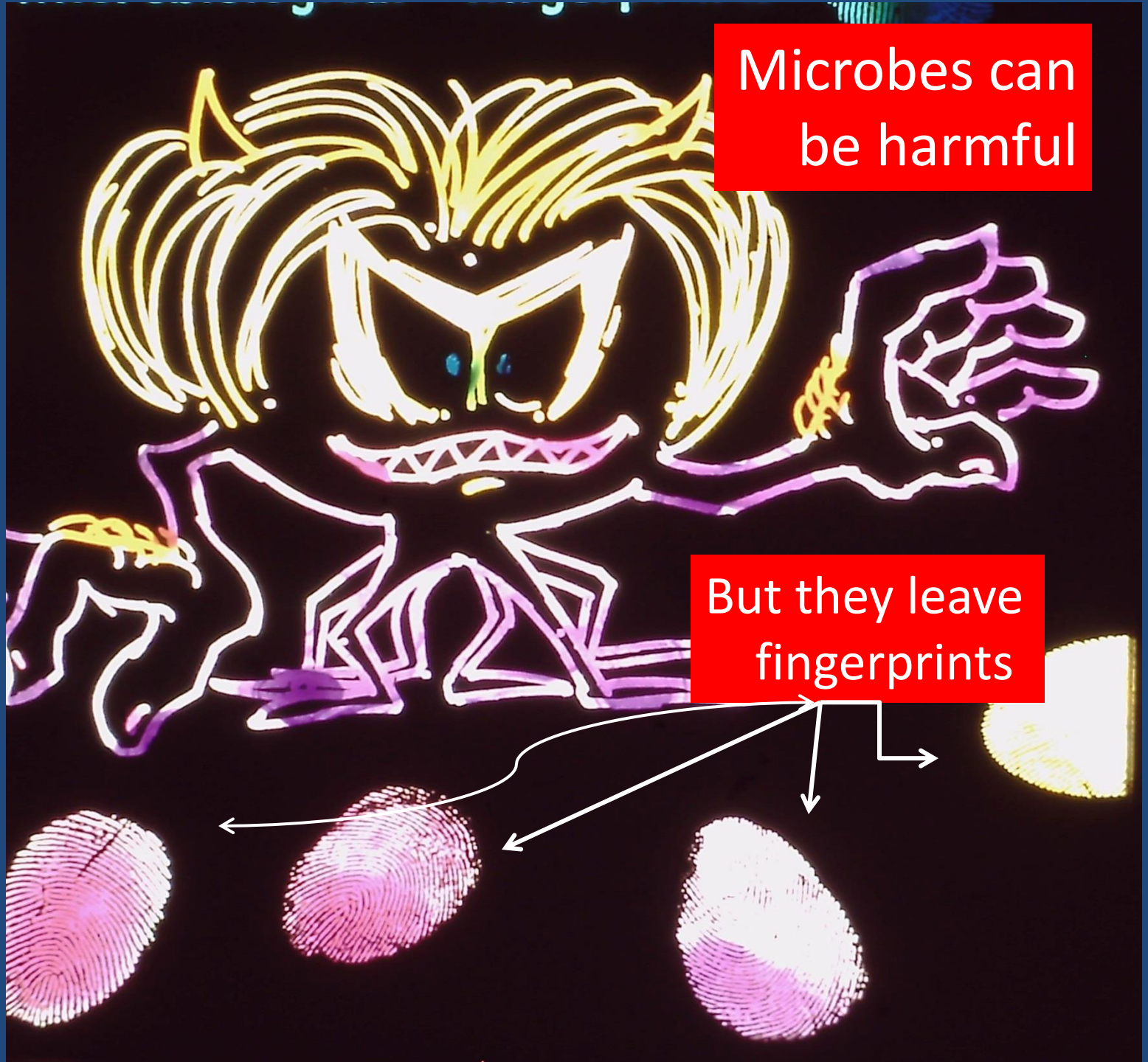
Microbiological Fingerprints

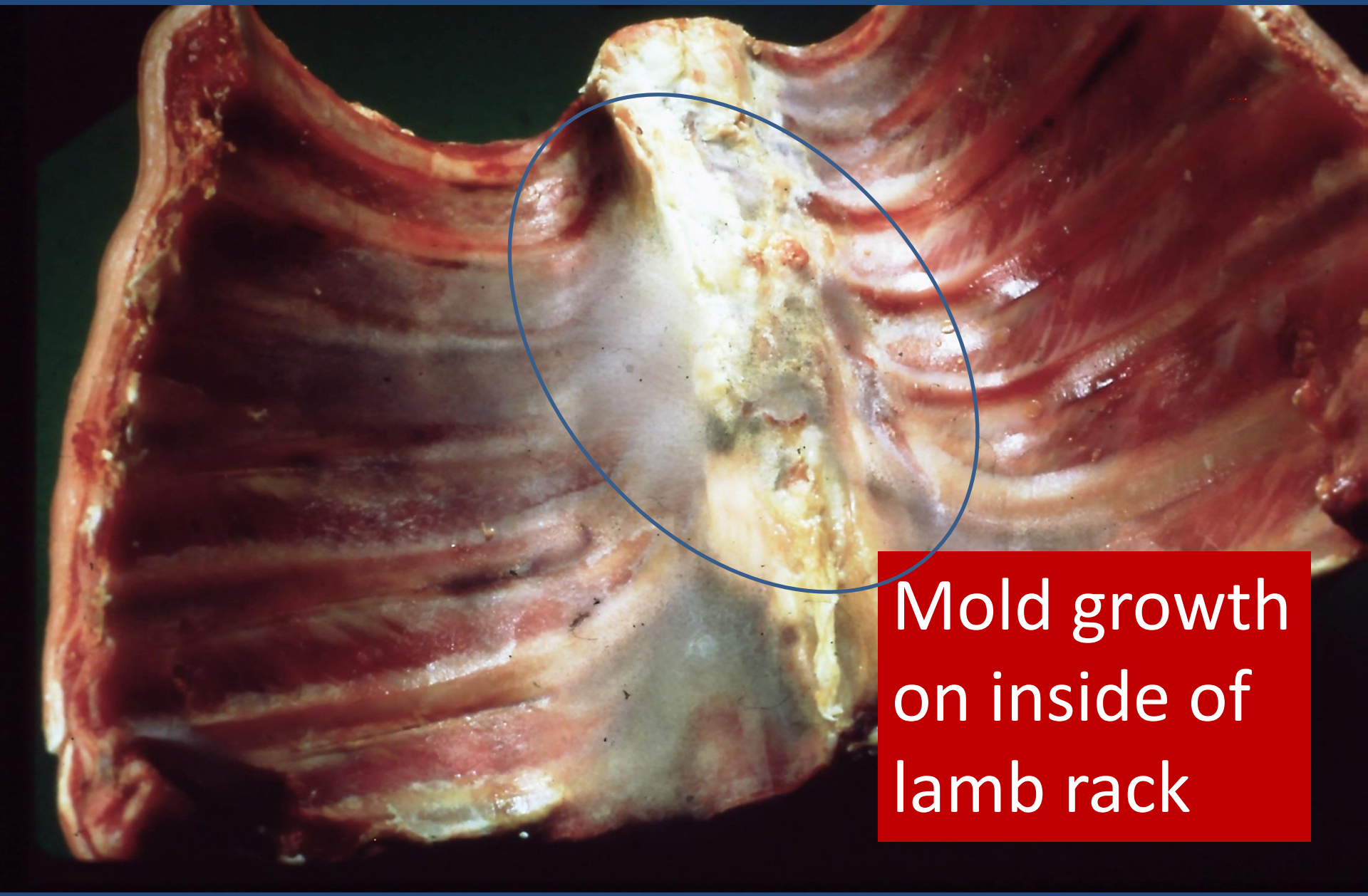
Prof Ockerman 2X2 slides originally constructed in the 60's

Some of script was added in 2015

The Ohio State University

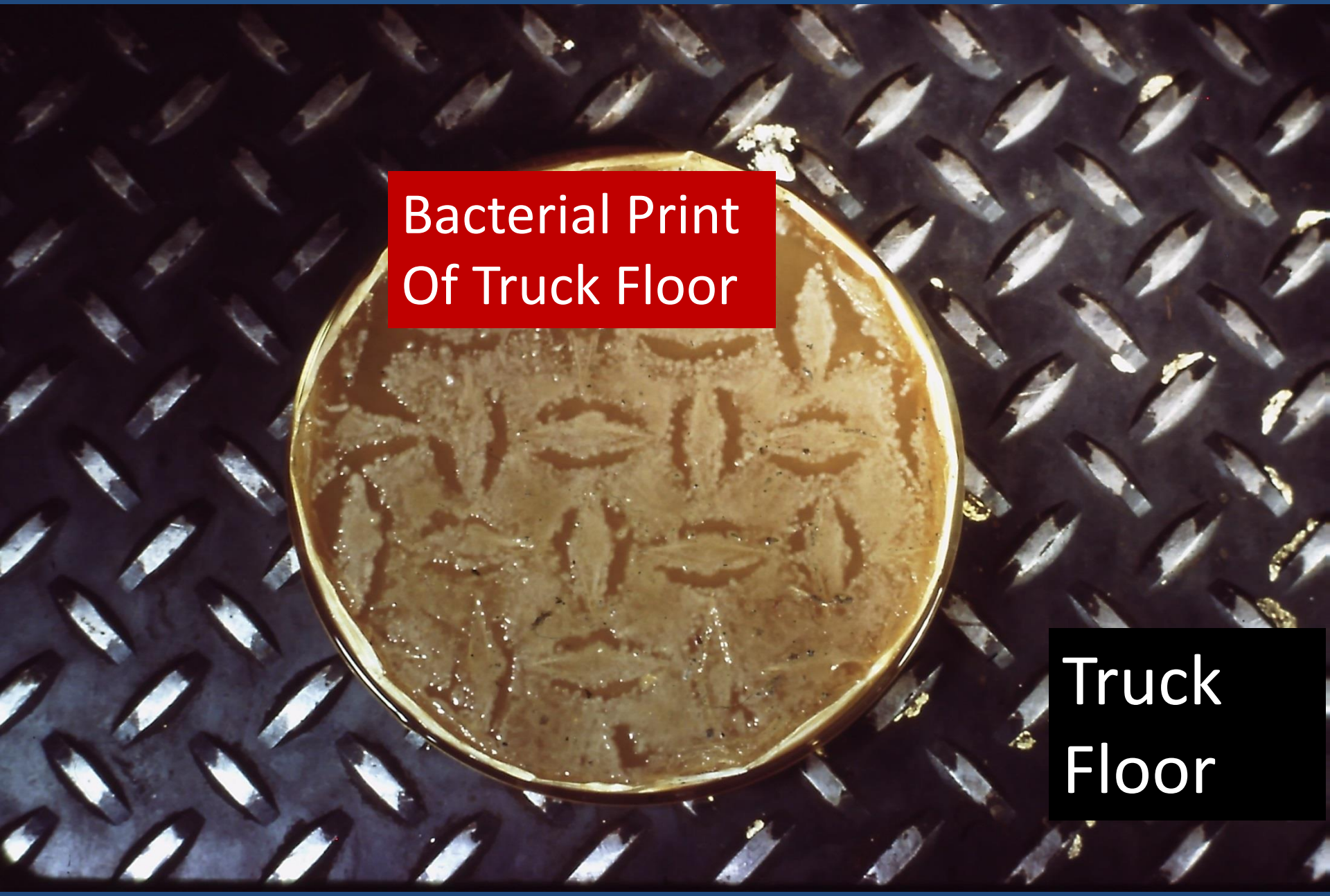
- To evaluate sanitation and to review the progress towards reducing contamination
- Viewing growth of microorganisms becomes necessary to accomplish the above


Microbes can be harmful
But they leave fingerprints

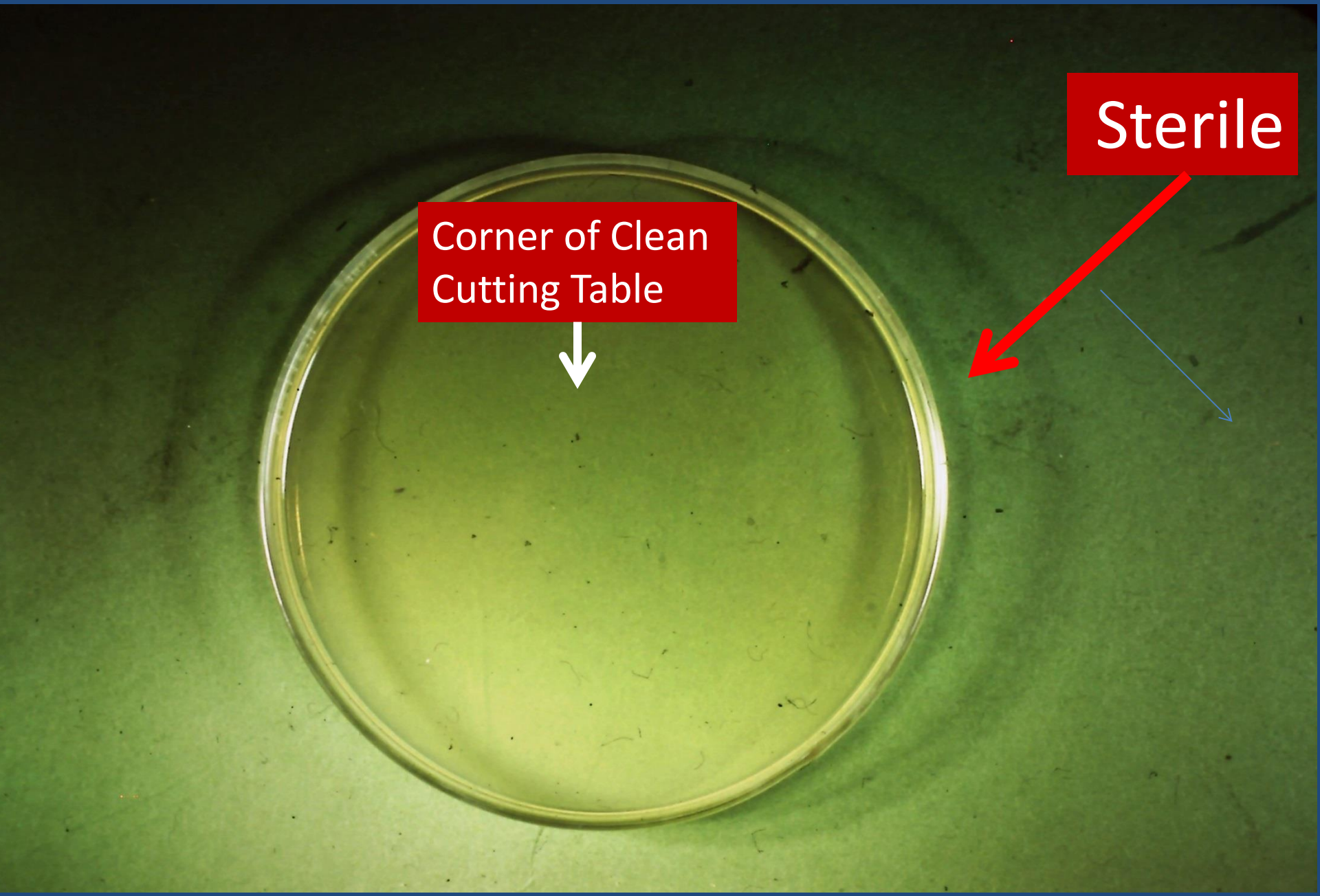

Mold growth on inside of lamb rack

Over-flowing Trash Container = microbe-rich environment


Clutter =
unclean
microbe-rich
environment


Bacterial Print
Of Truck Floor
Truck
Floor

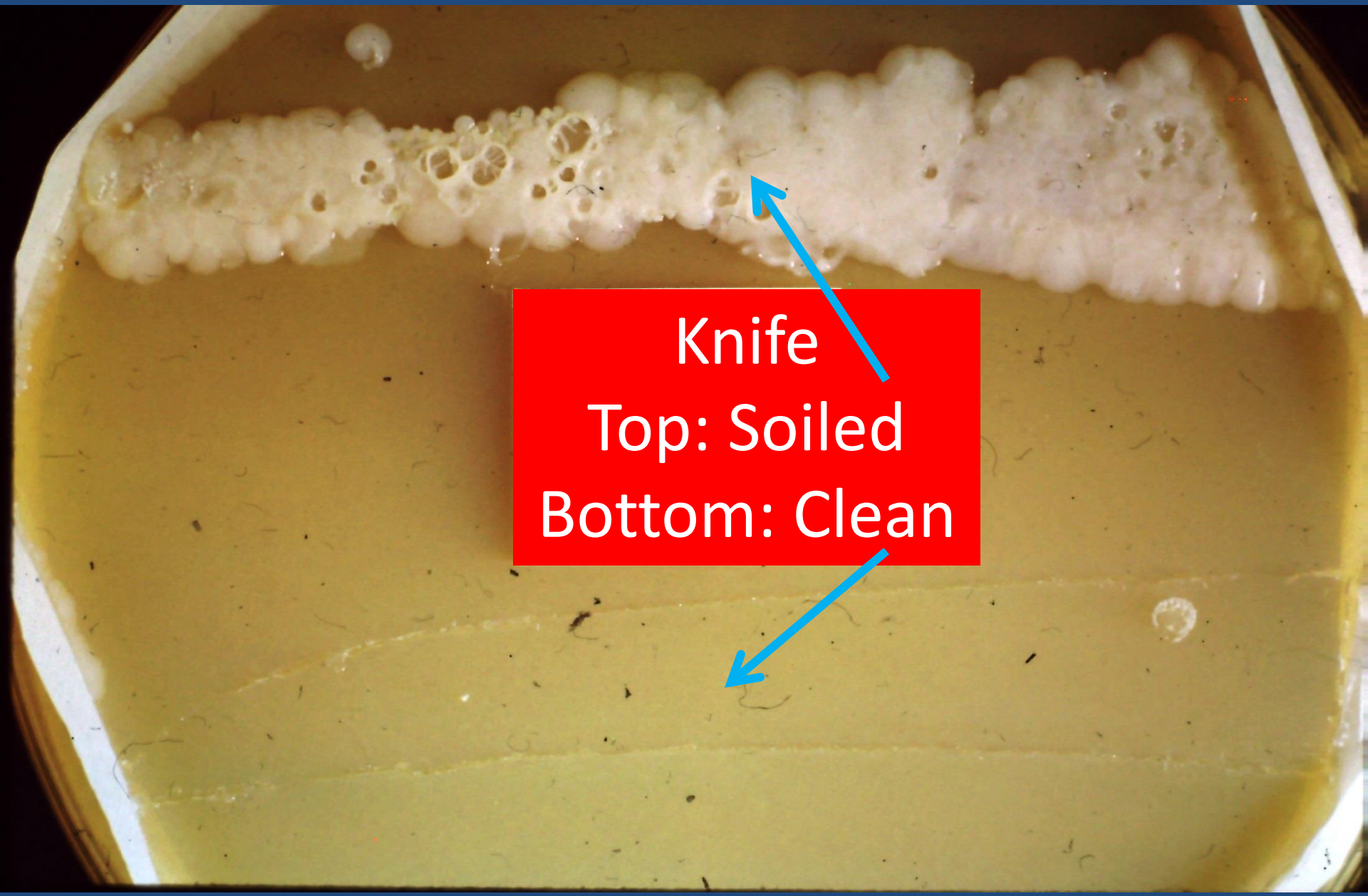

Corner of Unclean
Cutting Table

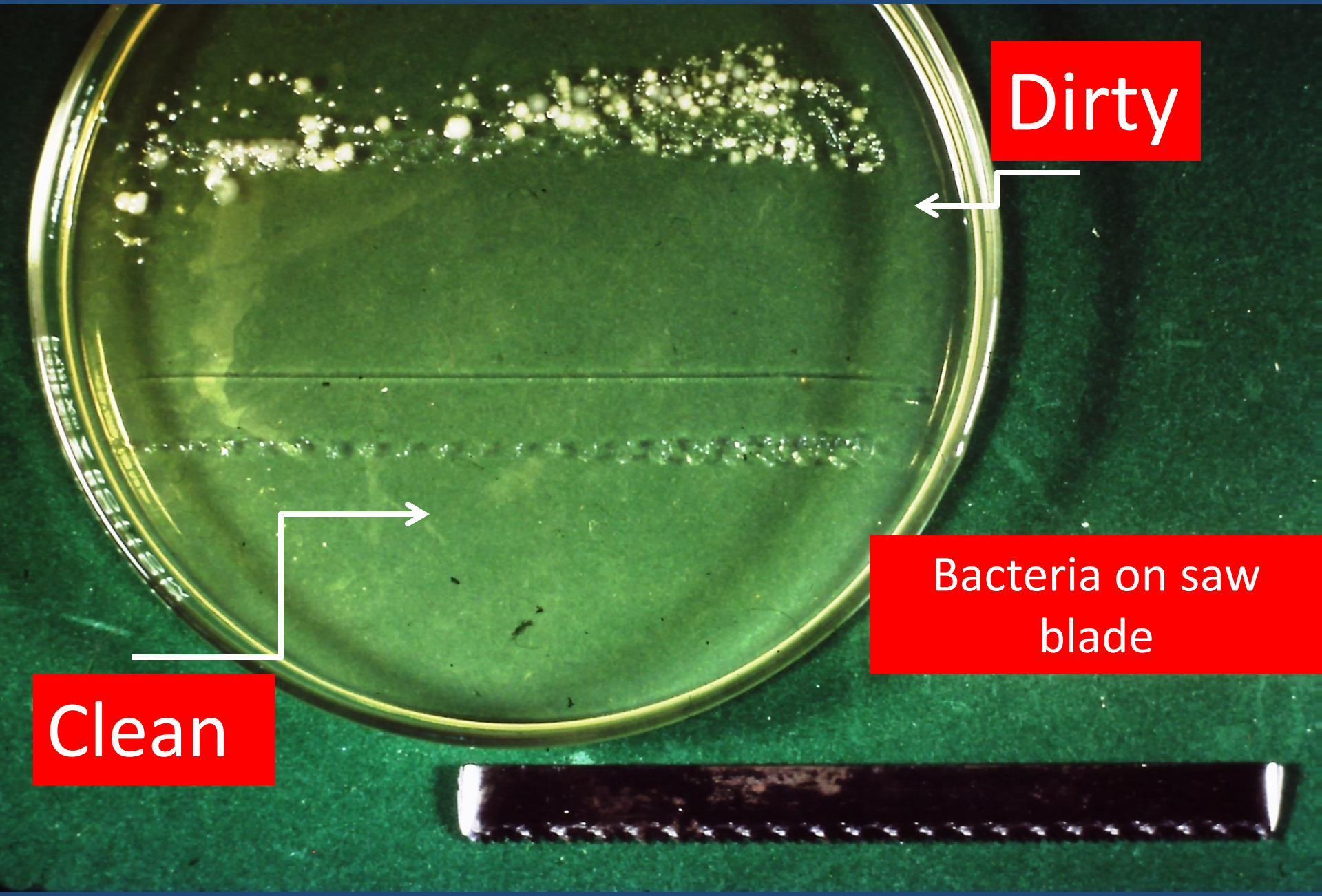

Sterile
Corner of Clean Cutting Table

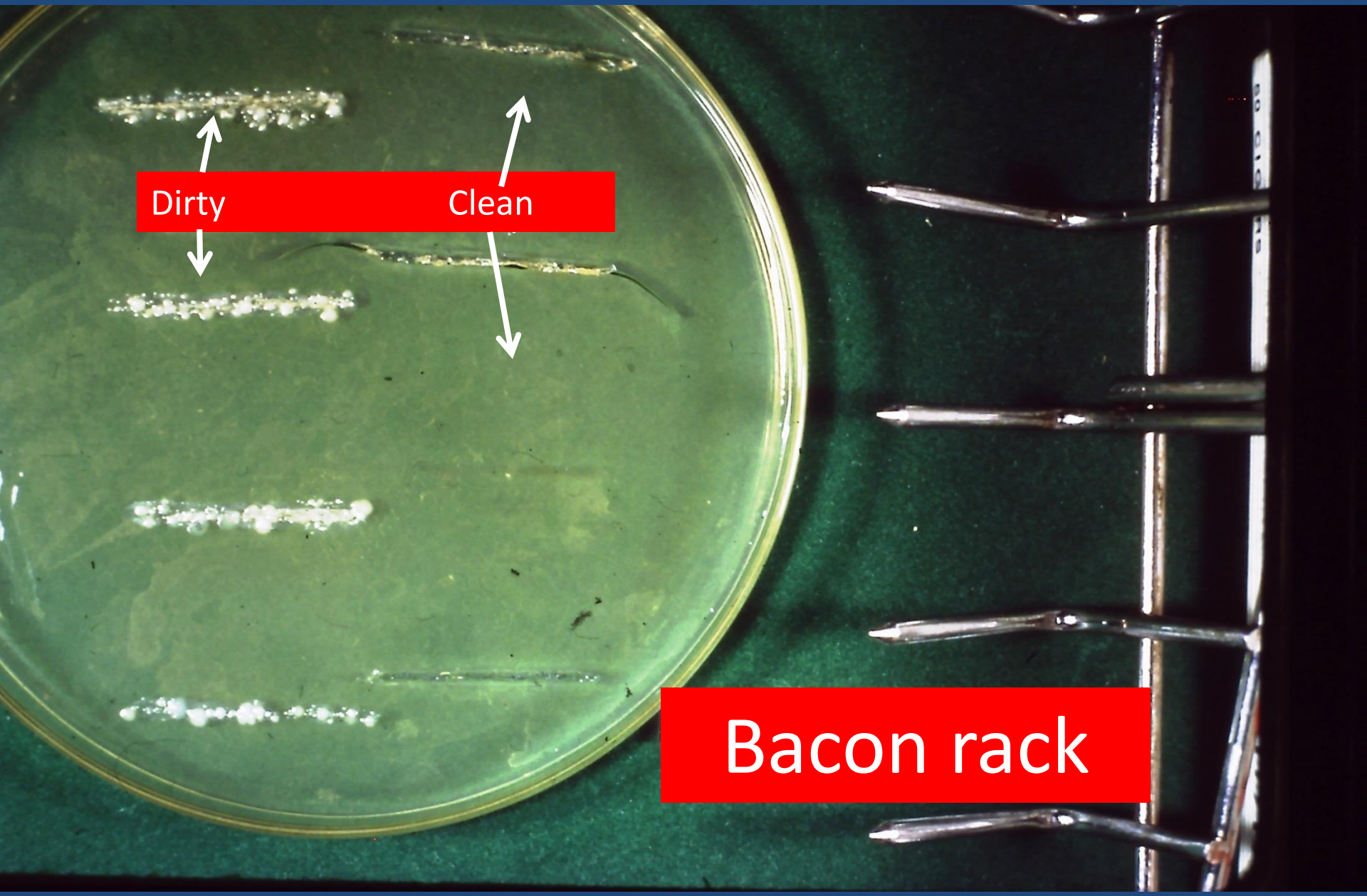

Meat Hook Top-> Dirty
Bottom hook-> Clean


Shroud Pin Top-> Dirty
Bottom-> Clean


Dirty
Clean
Tag Clips


Knife
Top: Soiled
Bottom: Clean

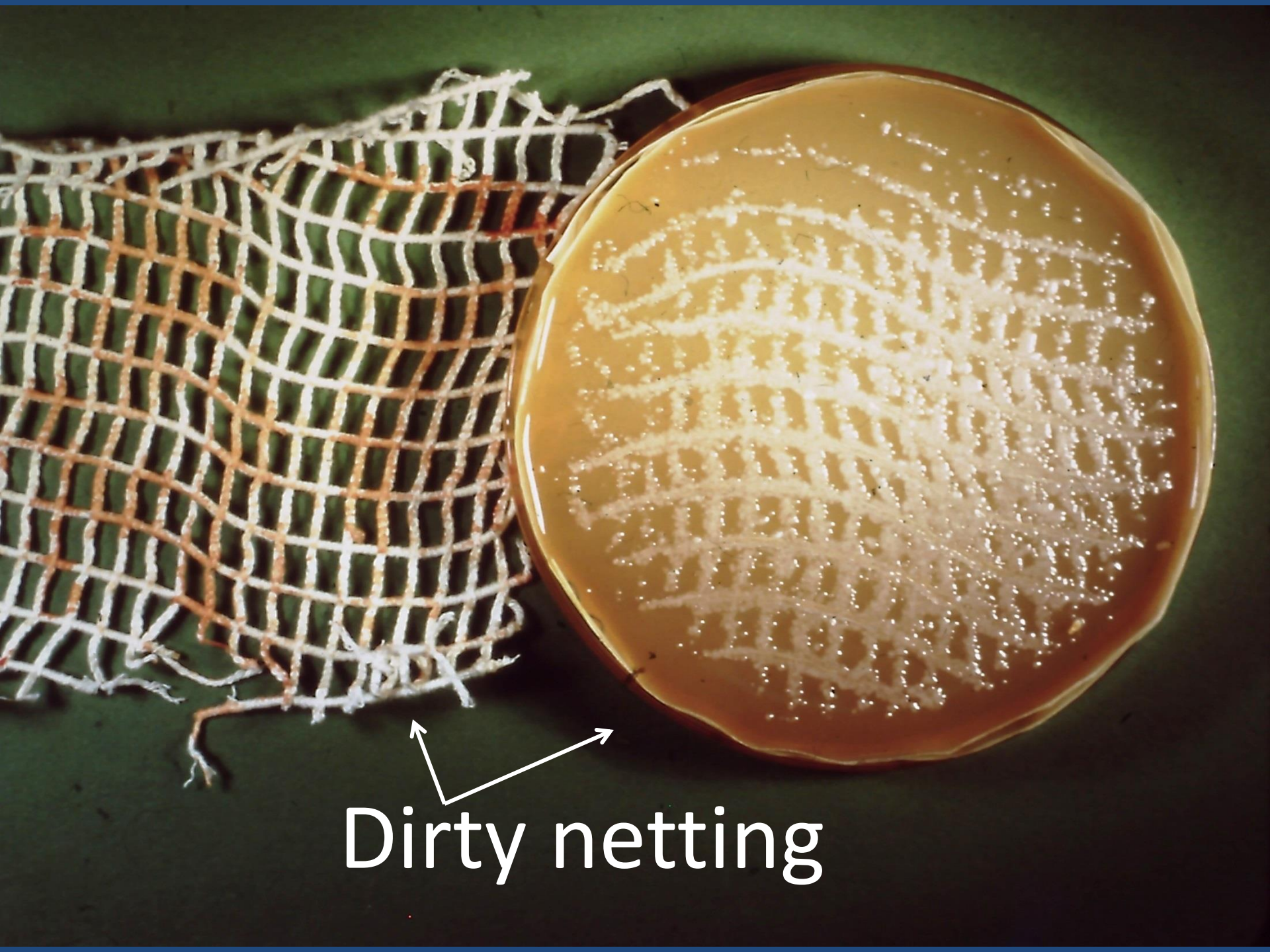

Dirty
Bacteria on saw blade
Clean

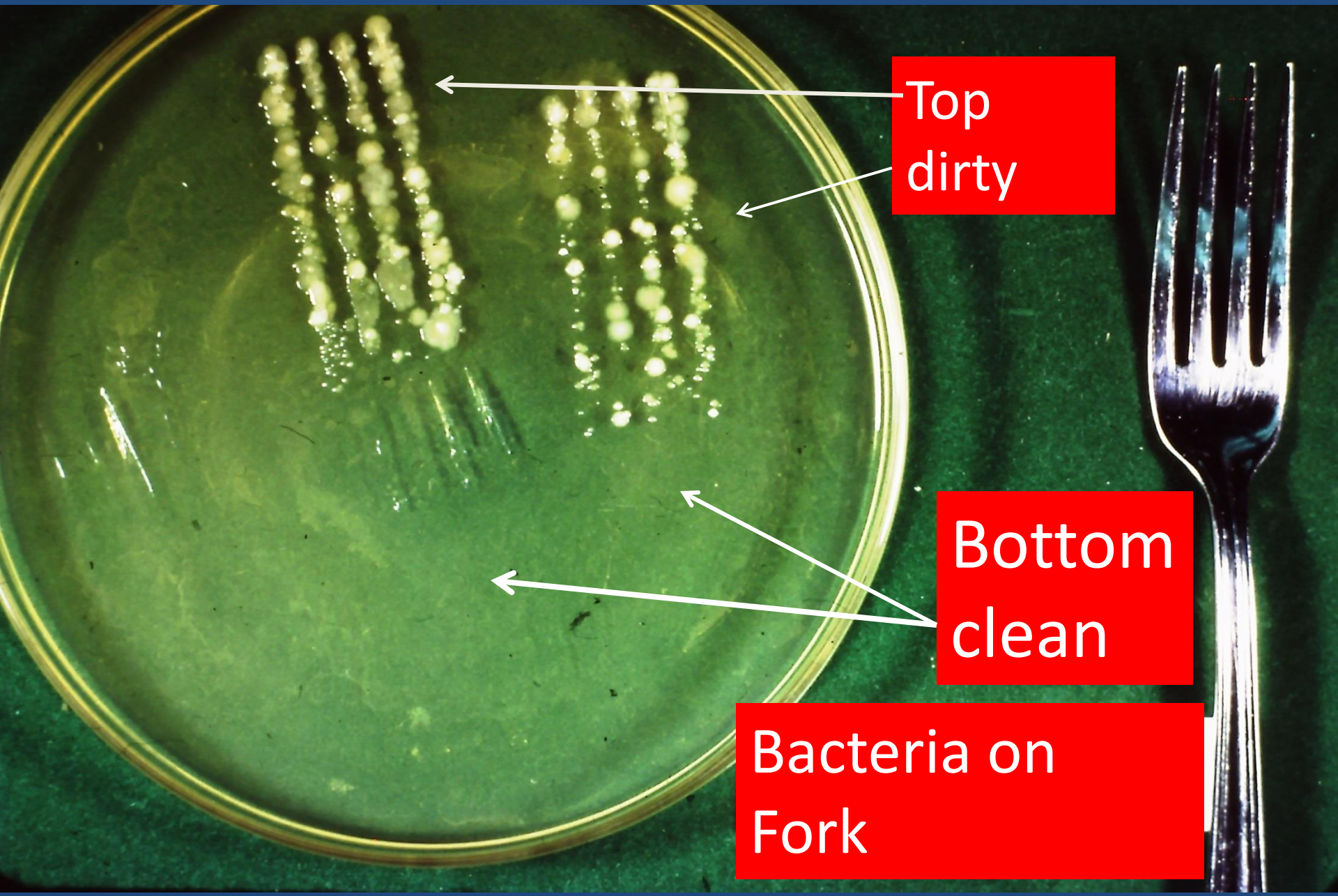

Dirty
Clean
Bacon rack

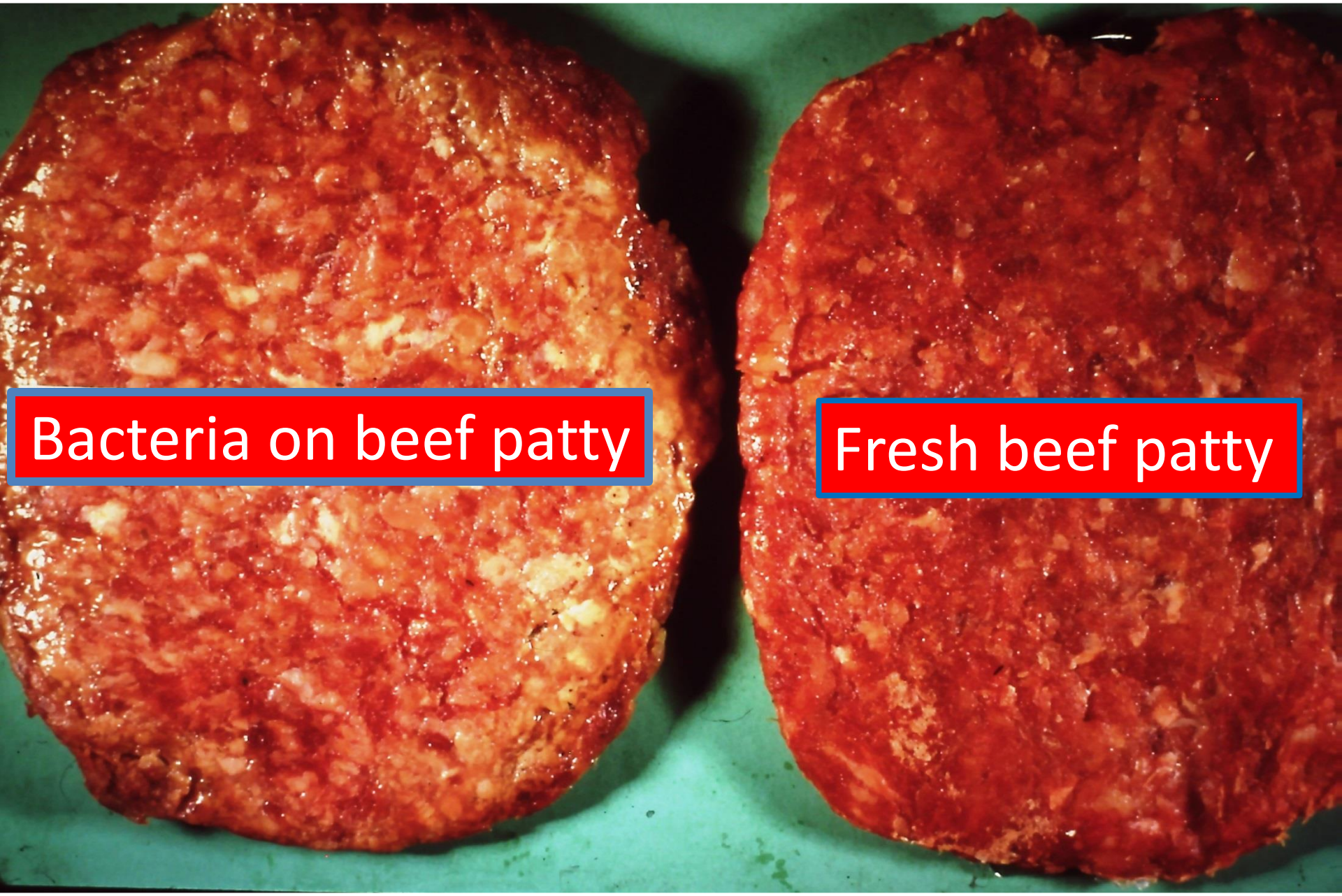

Cloth
Top: Dirty
Bottom: Clean

Grinder Plate and Grinder Knife


Stuffing Horn
Top: dirty Bottom: clean


Dirty netting


Top dirty
Bottom clean
Bacteria on Fork


Bacteria on beef patty
Fresh beef patty


BAD
HANDS DIRTY

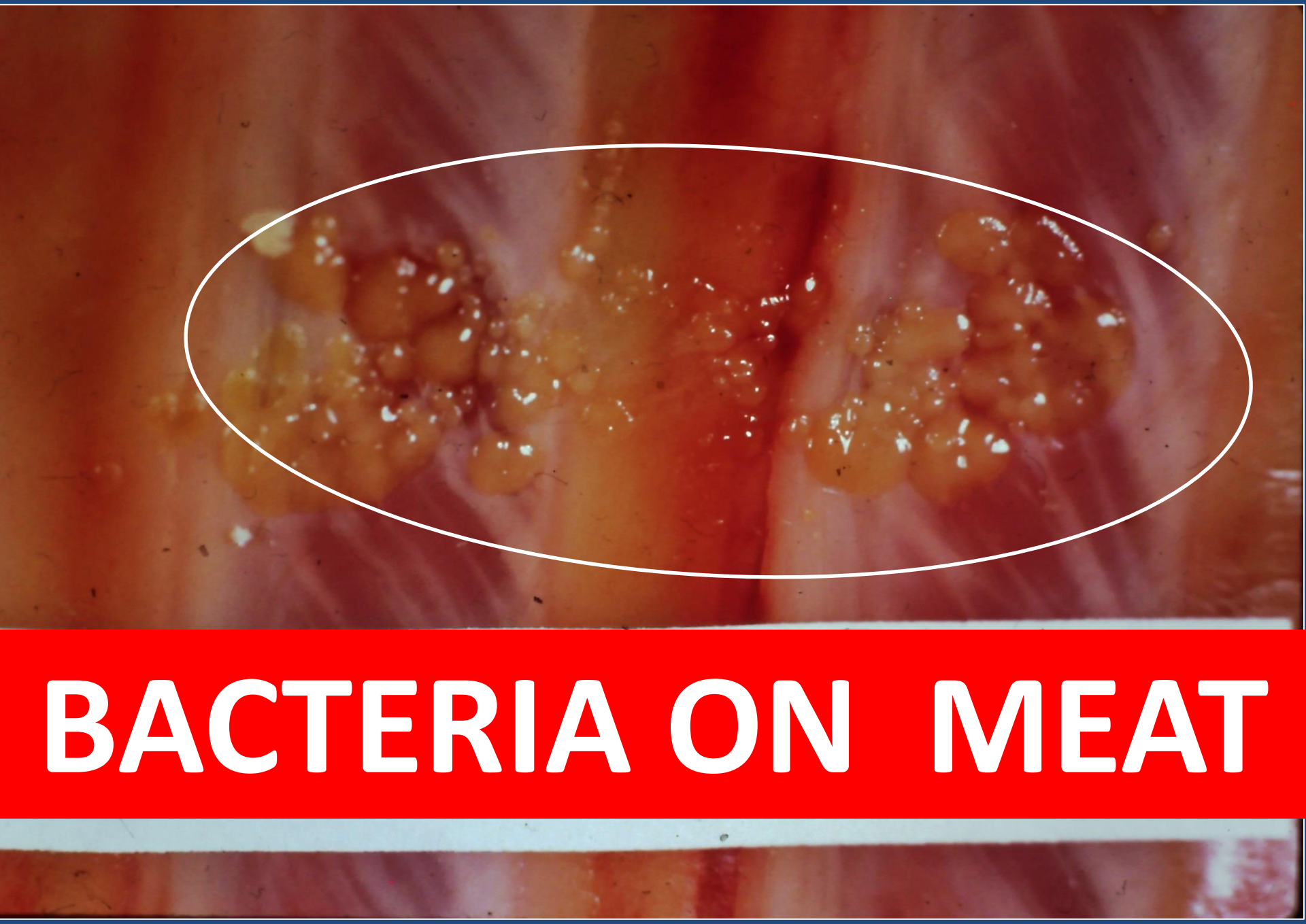

NO
BETTER
HANDS RINSED


ONLY
SLIGHTLY
BETTER
HANDS FIRST WASH

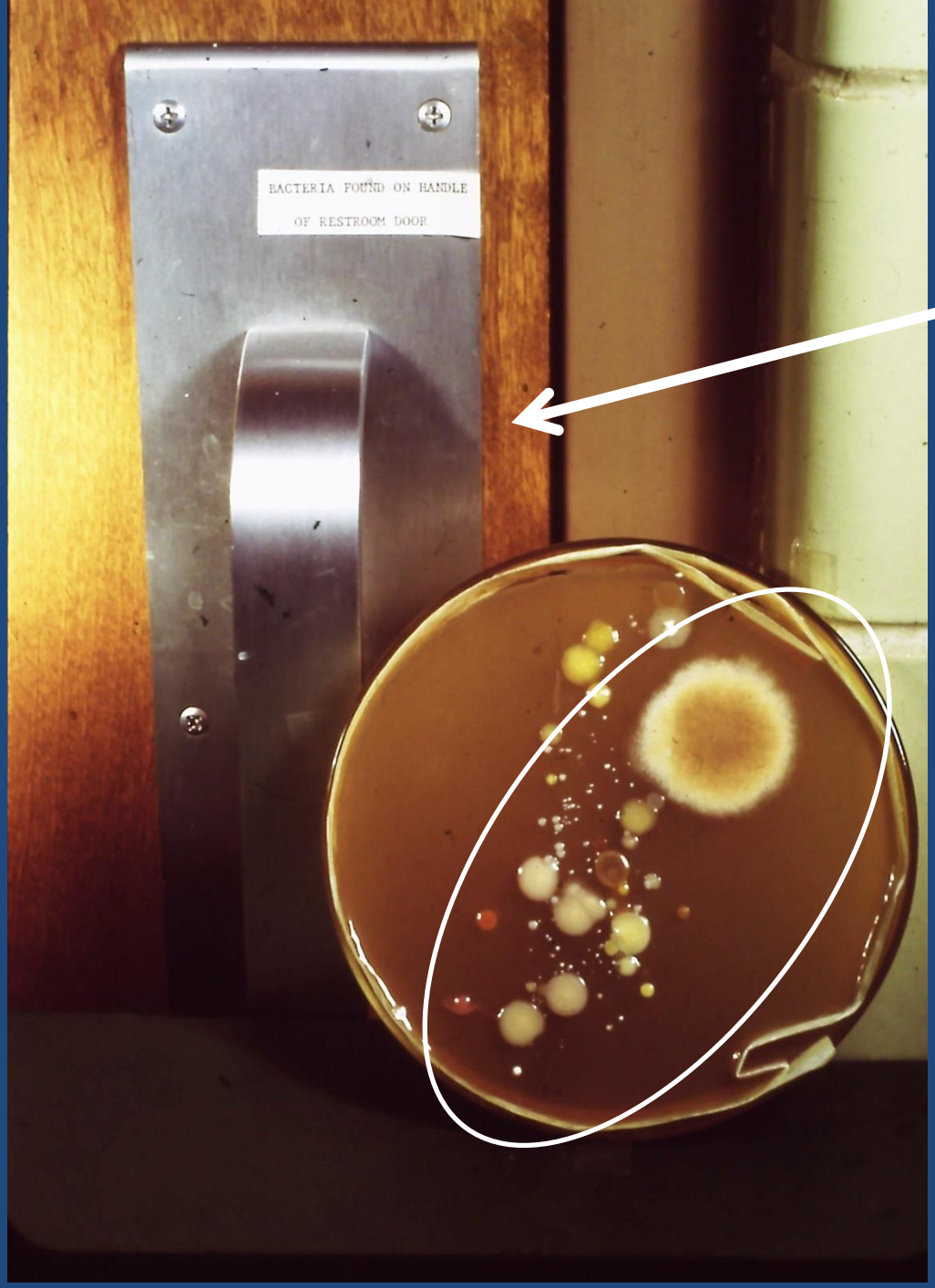

Much
BETTER
HANDS SACOND WASH


ALMOST
STERILE
HANDS SANITIZED

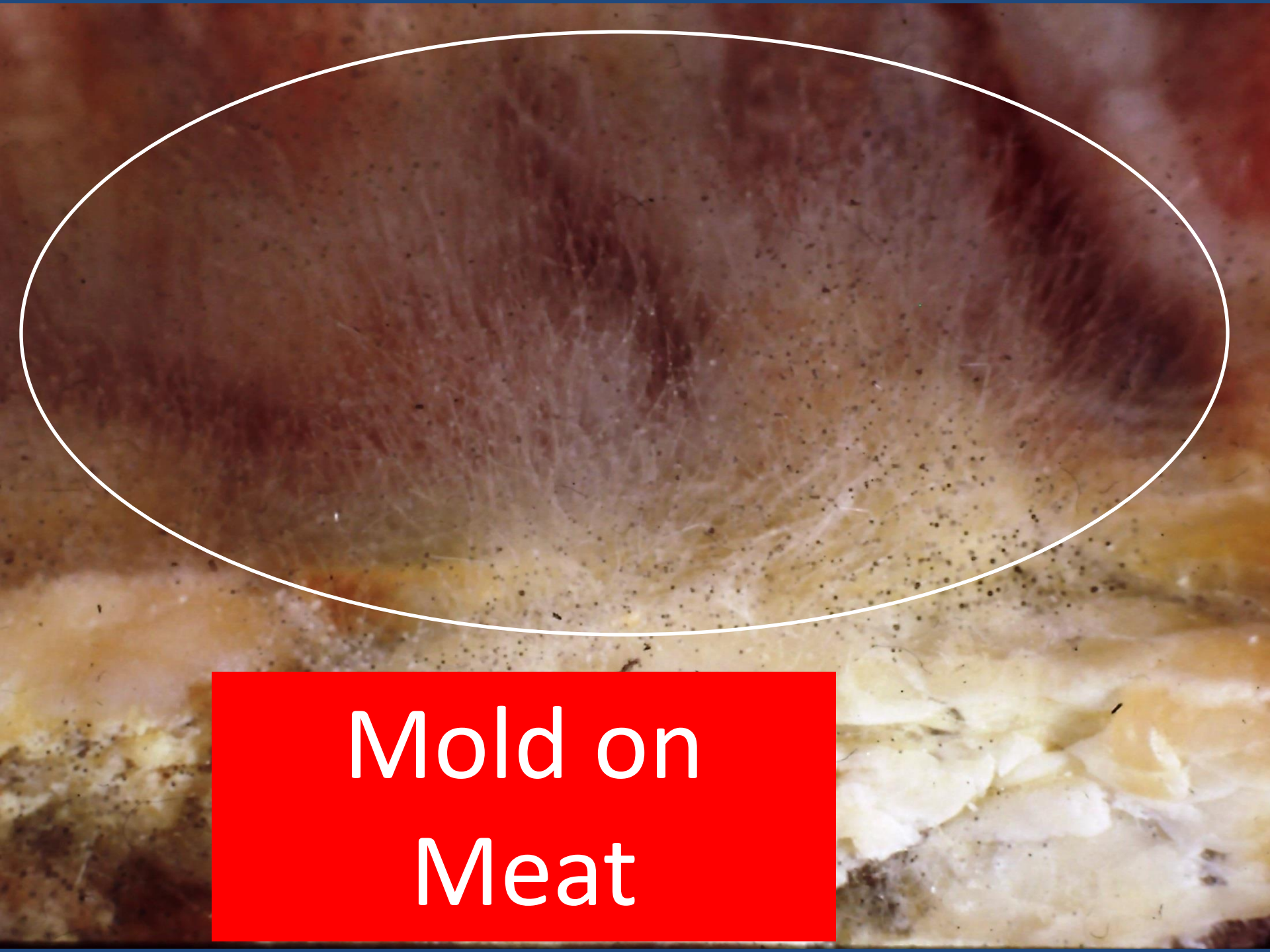

Bacteria on human washed hair
Reason for hair nets


BACTERIA ON MEAT


Door Handle
Dirty
Clean



Rest Room Door Handle


Mold on
Meat


FLY TRACKS


COCKROACH TRACKS

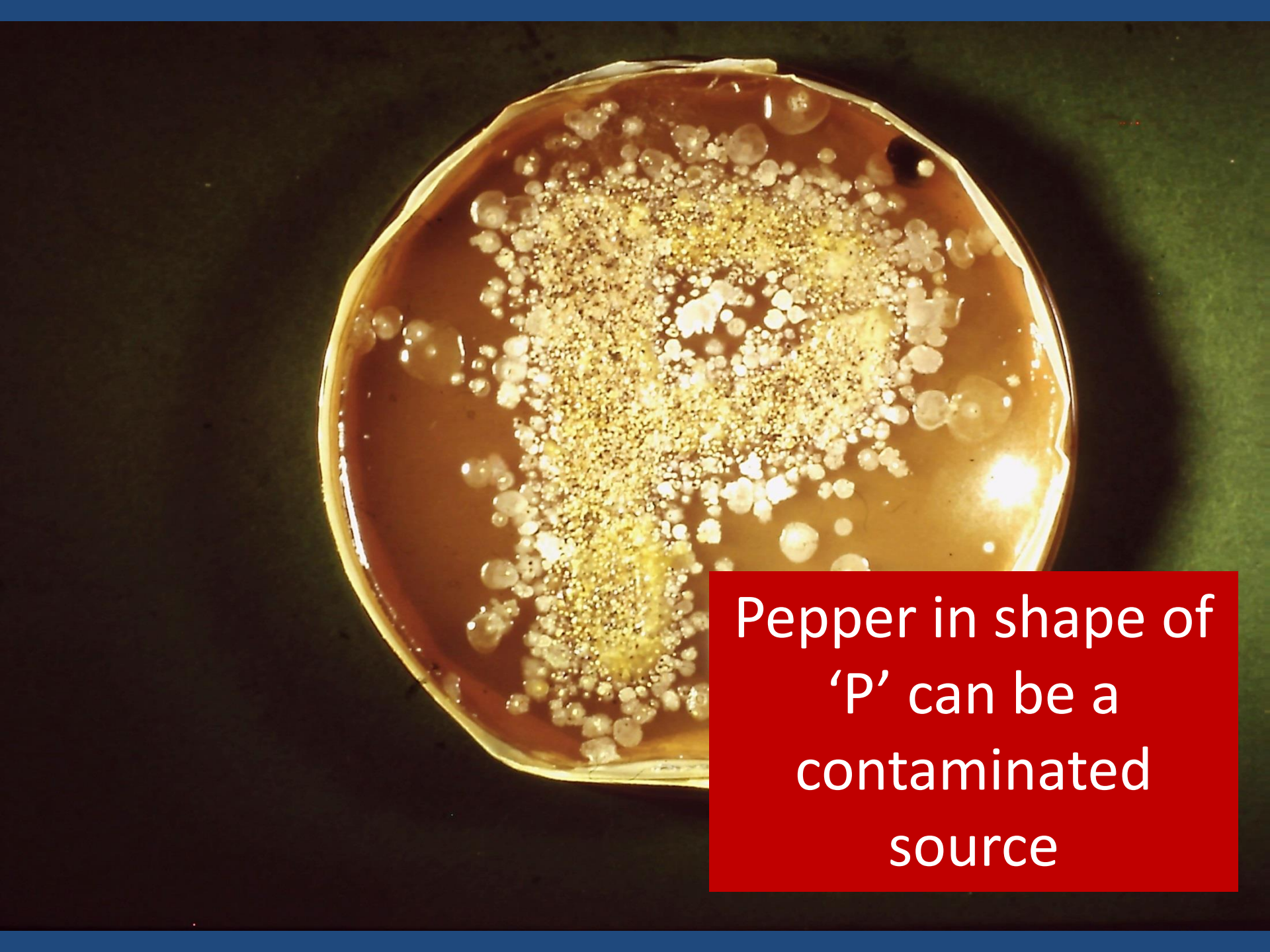

WHITE
MOUSE


TRACKS OF WHITE MOUSE
FOUR IMPRESSIONS

A few bacteria can grow even on salt

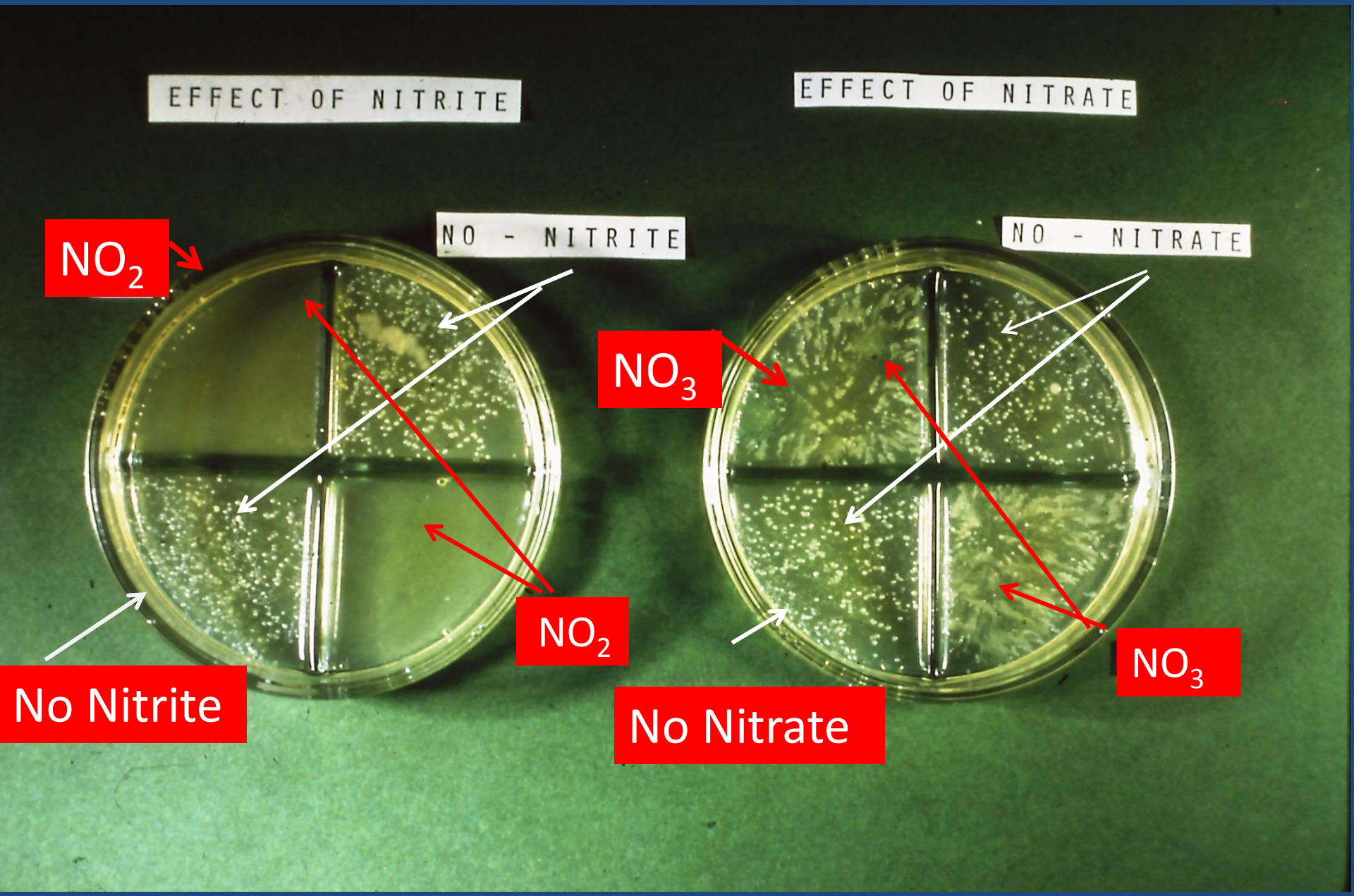
Bacteria found in Salt

Cloves ADDED IN SHAPE OF A “c”. As with other spices can be a contaminated source


Pepper in shape of ‘P’ can be a contaminated source

NITRITE IS A VERY GOOD ANTIBACTERIAL ADDITIVE

NITRATE IS NOT A VERY GOOD ANTIMICROBIAL ADDITIVE
BUT DOES CHANGE THE TYPE OF BACERIA THAT GROW

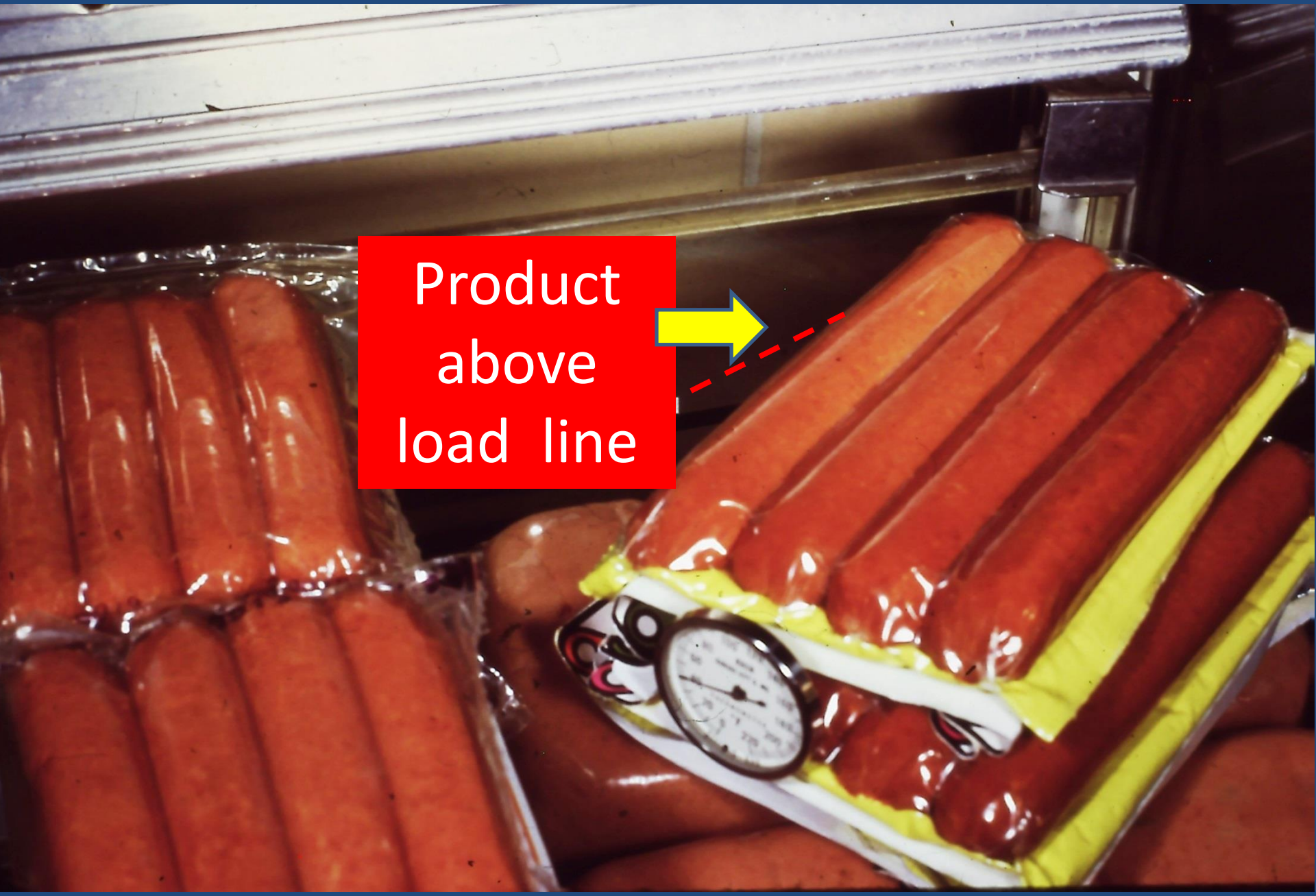

EFFECT OF NITRITE
NO - NITRITE
NO_2
NO_2
No Nitrite
EFFECT OF NITRATE
NO - NITRATE
NO_3
NO_3
No Nitrate


BACTERIA ON
COMMINUTED PRODUCT
FRESH COMMINUTED PRODUCT


Broken Cooler Door


Broken door insulation


100 120
80 KOCH 140
KANSAS CITY, MO.
60 160
40 180
THERMOMETER
20 200
Frosted Coils


Product
above
load line

Temperature Control
Not frozen: Box wet


BACTERIA ON BEEF
FRESH BEEF

TO SUMMARIZE. . .

a) HOUSE CLEANING - WASHING - SANITIZING

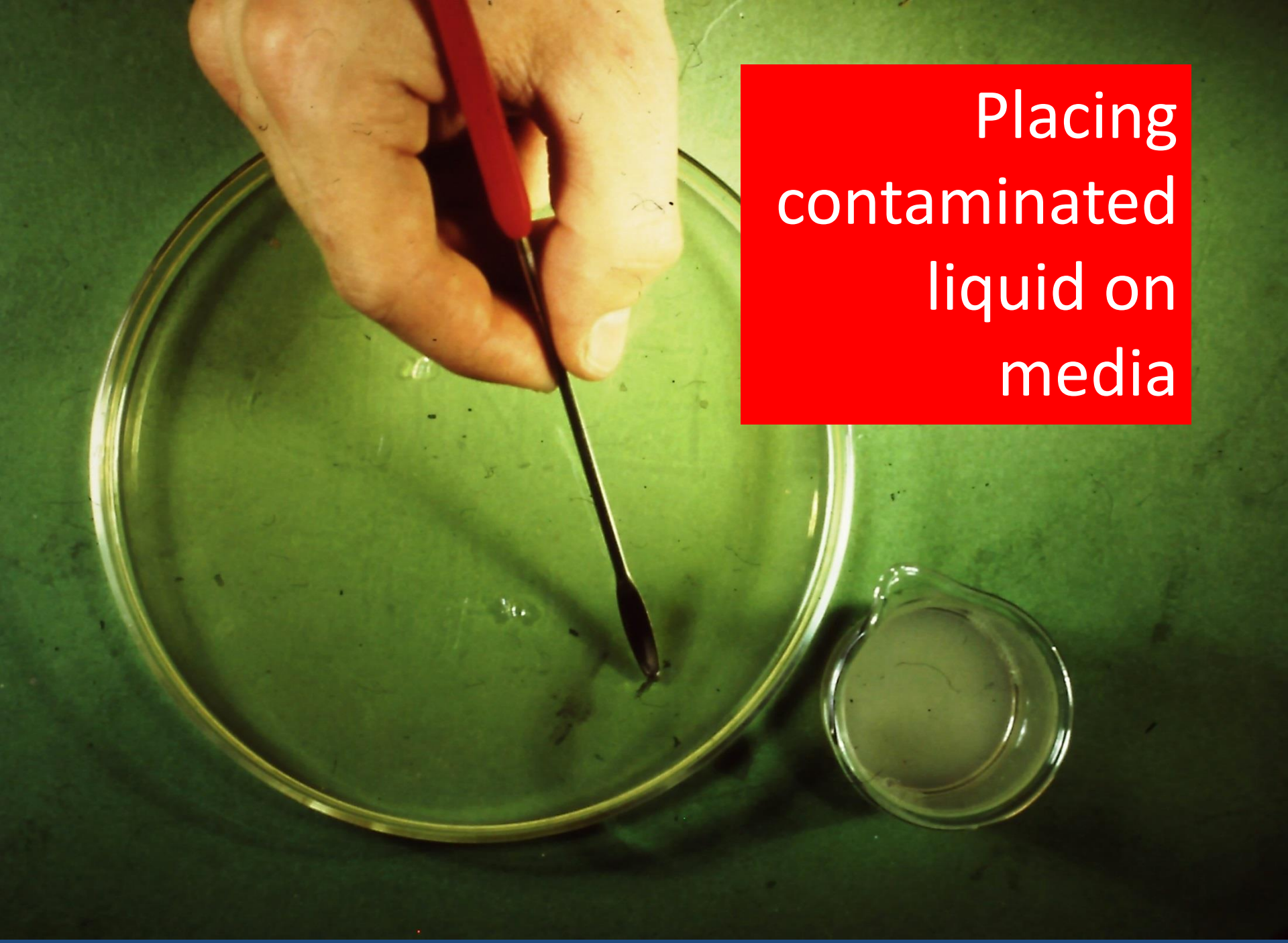
b) CLEAN EQUIPMENT - FREQUENT CLEAN-UP

c) PERSONAL HYGIENE - A MUST !

d) PEST CONTROL - ESSENTIAL!

e) ADDITIVES - RELATIONSHIP TO MICROBIOLOGY

f) TEMPERATURE CONTROL - ESSENTIAL!


Placing contaminated liquid on media

Bacteria sending us a message

Follow the rules or we will be back